AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-220

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

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SB SAT @ AMSAT $ANS-220.01
ANS-220 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 220.01
>From AMSAT HQ KENSINGTON, MD.
August 7, 2016
To All RADIO AMATEURS
BID: $ANS-220.01

Wouter Weggelaar PA3WEG Awarded Louis Varney Cup

On July 31 at the AMSAT-UK International Space colloquium in Guildford the RSGB Board Chair Steve Hartley G0FUW presented the RSGB Louis Varney Cup for Advances in Space Communications to Wouter Weggelaar PA3WEG.

The award was in recognition of Wouter’s outstanding technical contributions to several amateur satellites and associated outreach.

The presentation can be viewed here:
https://youtu.be/8GpewVRTKXQ

[ANS thanks AMSAT-UK for the above information]

Amateur Radio Presentations at EMF 2016 Guildford

Many radio amateurs are giving presentations at the Electromagnetic Field EMF 2016 event taking place near Guildford August 5-7 and two special event stations will be operating from the site. It is hoped the presentations may be streamed live on the web.

The event is aimed at makers, scientists, engineers and radio enthusiasts. Most radio amateurs will be in two villages on the site, HABville and the Amateur Radio Village.

The London Hackspace Amateur Radio Club are planning to erect at least one of their Clark masts in the amateur radio village. London Hackspace will be showcasing Amateur Radio on bands from 3.5 MHz (80m) to 430 MHz (70cm) and maybe higher using the call sign GB4EMF.

RSGB Youth Committee member Rebecca M6BUB will be at the GB8EMF station which will be using three ICOM transceivers, two IC-706MKIIG and an IC-746.

At 1559 GMT (4:59pm BST) on Saturday, August 6 the International Space Station (ISS) astronaut Kate Rubins KG5FYJ should be receivable at the event on a handheld radio tuned to 145.800 MHz FM. Full details at http://www.southgatearc.org/news/2016/july/ariss-event-0608.htm

The amateur radio satellite talks being given over the weekend are:
- A hacker’s guide to satellites – Dave Rowntree 2E0DRV (drummer in rock-band Blur)
- Receiving live video from the Space Station – Daniel Cussen EI9FHB HamTV
- The story behind $50SAT, a new approach to Amateur satellite design which became the world’s smallest operational satellite, built for £125 in a garden shed – Stuart Robinson GW7HPW

Other presentations by radio amateurs include:
- 100 years of Shannon – the man, his work and his legacy – Matthew Ireland MW0MIE
- Asynchronous or Analogue Methods for Computation – Matthew Ireland MW0MIE
- Connecting computers together over 1,000s miles without using the Internet – GB8EMF Amateur Radio Station
- Hacking Robot Dinosaurs – Dr Lucy Rogers M6CME (Judge on BBC Robot Wars)
- My Ubertooth Year – Michael Ossmann AD0NR developer of HackRF One SDR
- Numbers Stations: Cold War, short waves – Henry Cooke
- Rebooting a Hobby: How Modern Digital Comms are Reviving Amateur Radio – Ryan Sayre M0RYS

Electromagnetic Field EMF 2016
https://twitter.com/emfcamp
https://www.emfcamp.org/schedule
https://www.emfcamp.org/line-up/2016

EMF HABville https://wiki.emfcamp.org/wiki/Village:HABville

EMF Amateur Radio Village
https://wiki.emfcamp.org/wiki/Village:Amateur_Radio

London Hackspace ARC
https://twitter.com/m0hsl
https://wiki.london.hackspace.org.uk/view/Group:Amateur_Radio

Previous EMF events have generated BBC News coverage
https://amsat-uk.org/2014/09/02/bbc-reports-emf-2014/

What is Amateur Radio?
http://www.essexham.co.uk/what-is-amateur-radio

Find a short Amateur Radio training course near you at
https://thersgb.org/services/coursefinder/

The book Getting Started with Amateur Satellites 2016 is available
from the AMSAT-UK online shop
http://tinyurl.com/ANS220-GettingStartedUK

[ANS thanks AMSAT-UK for the above information]

AMSAT-UK Space Colloquium Videos Now Available

Thanks to the hard work of British Amateur Television Club (BATC)
and AMSAT-UK volunteers the videos of the presentations given to the
AMSAT-UK International Space Colloquium held in Guildford on July 30-
31, 2016 are now available on YouTube.

During the Colloquium AMSAT-UK operated a satellite ground station
using the call sign G0AUK. Contacts were made via the SO-50, AO-85
and FO-29 satellites.

The ground station used the Kenwood TS-2000X transceiver that was
successfully used for all the UK school contacts with astronaut Tim
Peake GB1SS during his Principia mission on the International Space
Station.

The TS-2000X was kindly loaned by Martin Lynch & Sons Ltd and
Kenwood Communications UK.

The 2016 Colloquium presentations along with those from previous
years can be found on the AMSAT-UK YouTube channel at
https://www.youtube.com/user/AMSATUK/playlists

The videos of the presentations can either be watched online or
downloaded to your PC using readily available free YouTube download
software for showing at club meetings.

AMSAT-UK publish a quarterly newsletter OSCAR News, a sample issue
can be downloaded here. Electronic (PDF) membership is £15 a year –
https://amsat-uk.org/new-members/join-now/

[ANS thanks AMSAT-UK for the above information]

Dayton Hamvention Moving to Greene County Fairgrounds in Xenia

Hamvention® announced today that it will be moving to the Greene

County Fairgrounds and Event Center in Xenia, Ohio, after 52 years at Hara Arena. That's about 16 miles east of Dayton center off US Route 35 (see map). Hara Arena announced last week that it would be closing, and Hamvention indicated that it soon would be announcing its back-up plan for a new venue in the Dayton area.

"We appreciate and value all the time and effort of the many partners, in particular the Greene County Agricultural Society, the Greene County Board of Commissioners and the Greene County Convention & Visitors Bureau has put into helping Hamvention find the right venue to continue our long history here in the Miami Valley," Hamvention General Chair Ron Cramer, KD8ENJ, said. "We look forward to a long and mutually prosperous relationship."

Last week, after Hara Arena announced it would close, Cramer had said, "We have spent many hours over the last few years evaluating possible locations and have found one in the area we believe will be a great new home! We all believe this new venue will be a spectacular place to hold our beloved event. Please rest assured we will have the event on the same weekend and, since it will be in the region, the current accommodations and outside events already planned for Hamvention 2017 should not be affected."

Hamvention chief spokesman and board member Mike Kalter, W8CI, told ARRL today that announcement of the new venue came a bit sooner than he'd anticipated last week. He pointed out that the event annually attracts in excess of 25,000 visitors from every US state and some 60 countries around the world.

"The key thing is that we plan to have a 5-star event," he said of Hamvention 2017. "We'll put a lot of time and energy into it."

The move to Xenia could prove to be a huge financial bonanza for the city and Greene County. Hamvention typically has meant millions of dollars to the Dayton/Montgomery County area, and some of that benefit now could migrate eastward down US 35. Kalter conceded that the new venue in Greene County is a slightly longer drive from Dayton City Center -- where some Hamvention-related events traditionally occur -- than it was to Hara Arena, but he believes it will be worth the trip.

"Montgomery County didn't have anything for us," he said. "We looked exhaustively. We've known this is what we'd do for about a month — if Hara Arena would no longer be available."

And the flea market at the new site? "Our plan is to have a much better flea market," Kalter said. "We have two or three different options, but we think people are really going to like it."

He said the entire fairgrounds facility was rebuilt several years ago after it was destroyed by a tornado, so the buildings are newer than Hara, which was built in the 1950s. He said there will be opportunities to bring in campers — with 30 A service, water, and sewer available.

Kalter believes the change in venue in and of itself will be a big incentive for a lot of people who may be just thinking about attending Hamvention 2017 right now. "We expect next year to be a big year," he said. "We expect a lot of people to come to see what it's like."

[ANS thanks ARRL for the above information]

LoTW adds UKube-1 Support

The ARRL has informed Paul, N8HM that TQSL configuration file version 9.3 will be released shortly adding support for UKube-1 in LoTW.

Please note that due to character limitations, the satellite name for LoTW will be "UKUBE1"

Clayton W5PFG followed up saying "Simply launching the TQSL application should inform you that a new configuration file is available. I've updated my log and uploaded all of my UKube-1 contacts with the new SAT_NAME parameter UKUBE1."

[ANS thanks the ARRL, Paul N8HM, and Clayton W5PFG for the above information]

Skyler Fennell, KD0WHB, is 2016 Young Ham of the Year

Skyler Fennell KD0WHB, of Denver, CO, has been selected as the 2016 Bill Pasternak WA6ITF Memorial Young Ham of the Year by the Amateur Radio Newsline.

Skyler's interest in satellite communications resulted in a revival of Colorado Amateur Satellite Net where he became a net control operator and created a website for the net: https://amsatnet.info/

Skyler, 17, is the son of Karl and Carol Fennell, and recently graduated with honors from Denver School of the Arts.

Skyler was first licensed in July 2013 as a Technician and upgraded to General by September 2013. He took and passed his Extra class license exam in January 2014.

Skyler's interest in basic electronics was sparked when he was in the fourth grade and continued into middle school and high school.

Among his early building projects were a laser spirograph, audio amplifiers, and high voltage transformer drivers.

A high school friend, Jordan Walters, KD0MLV, introduced Skyler to amateur radio when he was a freshman in high school , explaining how radio transmissions could bounce off layers of the atmosphere. That led Skyler to engage in a six-month period of study, testing and operating that resulted in his path to Extra.

Skyler has extensive experience in designing and working on repeater systems and introduced an AllStar Link system for one of the Rocky Mountain Radio League's repeaters.

He began working with the AB0BX STEM School Amateur Radio Club in nearby Littleton, CO and got involved in the group's Edge of Space Sciences missions (balloon launches with amateur equipment). He became project manager for its 440Mhz repeater and helped put together an AllStar and EchoLink repeater for students, serving as a mentor for construction of the project.

Skyler started the Denver School of the Arts amateur radio club in August 2015 and was trustee of the club call - KE0FXH.

Skyler has chronicled several of his amateur radio and technical achievements on his YouTube channel - "Skyler F."

He was also involved in proposing and assisting in the construction of a VHF/UHF repeater at a remote base site on Blue Mountain in the Denver area and added an AllStar link to the system.

This past May, Skyler spoke at the Youth Forum at the Dayton Hamvention on the topic: "Homebrewing on a Budget." He also addressed the Quarter Century Wireless Association forum in Dayton about how his technical interests will help him further his educational and career goals.

Skyler is an Eagle Scout, a rank he achieved at the age of 13. He also combined his interest in cycling and amateur radio, assembling a bicycling mobile set-up with VHF and UHF radios.

He is also an accomplished pianist and earned the first-place trophy in the recent U.S. International Duo Piano competition in Colorado Springs this past February after performing a Poulenic piano sonata for four hands, two pianos.

Skyler will be recognized during the Huntsville Hamfest on Aug. 20 in the Von Braun Civic Center, Huntsville, AL.

The Young Ham of the Year award was inaugurated by William Pasternak, WA6ITF, in 1986. Upon his passing in 2015, Bill's name was added to the award as a memorial to his commitment to recognizing the accomplishments of young people to the amateur radio service.

In addition to Amateur Radio Newsline, CQ Magazine and Yaesu USA are primary sponsors, along with Heil Sound Ltd. and Radiowavz Antenna Company.

Skyler will be receiving a gift of amateur radio gear from Yaesu and a complimentary week at Space Camp, Huntsville, provided by CQ.

[ANS thanks Amateur Radio Newsline and CQ Communications, Inc. for the above information]

NASA’s CubeSat Launch Initiative Opens Space to Educators, Nonprofits

Accredited education institutions, nonprofit organizations and NASA centers can join the adventure and challenges of space while helping the agency achieve its exploration goals through the next round of the agency’s CubeSat Launch Initiative (CSLI). Applicants must submit proposals by 4:30 p.m. EST, Nov. 22.

The CSLI provides CubeSat developers with a low-cost pathway to space to conduct research that advances NASA's strategic goals in the areas of science, exploration, technology development, education and operations. The initiative provides students, teachers and faculty with the chance to get hands-on flight hardware development experience designing, building and operating these small research satellites.

NASA will make selections by Feb. 17, 2017, but selection does not guarantee a launch opportunity. Selected experiments will be considered as auxiliary payloads on agency launches or for deployment from the International Space Station beginning in 2017 through 2020. If chosen, U.S. nonpro?t and accredited educational organizations are entirely responsible for funding the development of the small satellites.

To date, NASA has selected 119 CubeSat missions, 46 of which have been launched into space. NASA has offered a launch opportunity to 95 percent of those selected through previous announcements, with 29 scheduled for launch within the next 12 months. The selected CubeSats represent participants from 32 states, demonstrating the significant progress NASA has made on a remarkable goal established during the 2015 White House Maker Faire, to launch a small satellite from at least one participant in every state during the next five years.

For this round of the initiative, NASA is particularly interested in participation from organizations in the District of Columbia, Puerto Rico, and 18 states not previously selected. These states are: Arkansas, Delaware, Georgia, Iowa, Kansas, Maine, Minnesota, Mississippi, Nebraska, Nevada, New Hampshire, North Carolina, Oklahoma, Oregon, South Carolina, South Dakota, Washington and Wyoming.

CubeSats are in a class of research spacecraft called nanosatellites. Base CubeSat dimensions are about 4-by-4-by-4 inches (10-by-10-by-11 centimeters), which equals one Cube, or 1U. CubeSats supported by this launch effort include volumes of 1U, 2U, 3U and 6U. CubeSats of 1U, 2U and 3U size typically have a mass of about three pounds (1.33 kilograms) per 1U Cube. A 6U CubeSat typically has a mass of about 26.5 pounds (12 to 14 kilograms). The CubeSat's final mass depends on the selected deployment method.

Small satellites, including CubeSats, play a valuable role in the agency’s exploration, science, technology and educational investigations. These miniature satellites provide a low-cost platform for NASA science missions, including planetary exploration, Earth observation, and fundamental Earth and space science. They are a cornerstone in the development of cutting-edge NASA technologies like laser communications, satellite-to-satellite communications and autonomous movement.

NASA also is using small satellites to demonstrate and validate the vehicles, systems and protections humans need to live and work in space and on other worlds. They are an inexpensive means to engage students in all phases of satellite development, operation and exploitation through real-world, hands-on research and development experience on NASA-funded rideshare launch opportunities.

For additional information about NASA's CubeSat Launch Initiative, visit:

http://www.nasa.gov/directorates/heo/home/CubeSats_initiative

To explore images from our previous launches, follow us on Flickr:

https://www.flickr.com/photos/145538433(a)N02/

Find us on Instagram:

https://www.instagram.com/nasa_cubesat/

[ANS thanks NASA News Release for the above information]

Sign Up for New NASA Education 'Science WOW!' Weekly Email Newsletter

Are you a science educator or interested in science education? Sign up for the NASA Education "Science WOW!" mailing list. Receive an email with NASA's latest science education offerings delivered "Weekly on Wednesdays."

Science starts with a question, and so does "Science WOW!" Each week's message kicks off with a science question and a link to where you can find the answer. "Science WOW!" also highlights an awesome science education tool each week. These featured resources will include NASA apps, interactive games, 3-D printing templates and more!

Plus, "Science WOW!" delivers -- right to your inbox -- the latest science education opportunities offered by NASA. It's a simple way to keep up with the latest professional development webinars, student contests, workshops, lectures and other activities.

The first "Science WOW!" message is scheduled to be sent on Aug. 10, 2016.

To register your email address and be added to the list, visit https://www.nasa.gov/education/sciencewow/.

[ANS thanks NASA Education Express Message -- Aug. 4, 2016 for the above information]

AMSAT-NA Board of Directors Ballots in the Mail

Ballots have been mailed to AMSAT-NA members in good standing, and must be returned to the AMSAT-NA office by September 15, 2016 in order to be counted. Those sent outside North America were sent by air mail. If you have not received your ballot package in a reasonable time for your QTH, please contact the AMSAT-NA office. Your completed ballot should be sent as promptly as possible, and those from outside North American preferably by air mail or other expedited means.

This year there are five candidates:

Tom Clark, K3IO
Clayton Coleman, W5PFG
Mark Hammond, N8MH
Bruce Paige, KK5DO
Paul Stoetzer, N8HM

The three candidates receiving the highest number of votes will be seated as voting Board Members with two year terms. The two candidates receiving the next highest number of votes will be non-voting Alternate Board Members with terms of one year. Please vote for no more than three candidates.

Please take the time to review the candidate statements that accompany the ballot and determine who you wish to see on the Board. Election of Board members is both an obligation as well as an

opportunity by our membership to help shape the future direction of AMSAT-NA.

[ANS thanks AMSAT Office for the above information]

ARISS News

+ A Successful contact was made between Sacred Heart Primary School, New Taipei City, Taiwan and Astronaut Takuya Onishi KF5LKS using Callsign OR4ISS. The contact began Tue 2016-08-02 08:36:03 UTC and lasted about nine and a half minutes. Contact was direct via BNØSH.
ARISS Mentor was Satoshi 7M3TJZ.

+ A Successful contact was made between Space Jam 10, Rantoul IL, USA and Astronaut Kate Rubins KG5FYJ using Callsign OR4ISS. The contact began Sat 2016-08-06 15:59:03 UTC and lasted about nine and a half minutes. Contact was Telebridged via IK1SLD.
ARISS Mentor was Charlie AJ9N.

Upcoming ARISS Contact Schedule as of 2016-08-04 06:00 UTC

Quick list of scheduled contacts and events:

OK2KJT Radioclub, Valasska Polanka, Czech Republic, direct via OK2KET
The ISS callsign is presently scheduled to be OR4ISS
The scheduled astronaut is Takuya Onishi KF5LKS
Contact is a go for: Wed 2016-08-10 18:56:17

U.S. Space & Rocket Center, Huntsville AL, telebridge via VK4KHZ
The ISS callsign is presently scheduled to be NA1SS
The scheduled astronaut is Kate Rubins KG5FYJ
Contact is a go for: Thu 2016-08-11 15:25:44

U.S. Space & Rocket Center Information:

Since 1982, Space Camp® at the U.S. Space and Rocket Center in Huntsville, Alabama has been inspiring people of all ages about space science, space flight, and space exploration. Among the 750,000 Space Camp graduates worldwide are five astronaut alumnae, including Dr. Kate Rubins, slated to launch on expedition 48/49 to the ISS this summer. Her presence on the space station provides an incredible opportunity for young people currently attending Space Camp to be able to talk to someone who was once in their shoes who went on to become an astronaut. It is also very likely that international students will be taking part in Space Camp during the link. These students will have a unique opportunity while visiting the United States to take part in an active exchange with the largest multi-national laboratory on-or off-the planet! In addition to Space Camp trainees, museum guests will have the opportunity to take part in the activity. As the original NASA visitor center, the U.S. Space & Rocket Center has been telling NASA's story since 1970. And with over 650,000 visitors annually, the Space and Rocket Center is Alabama's top tourism attraction. And depending on when the event falls in the summer, the USSRC may also bring in educators attending Space Academy for Educators, an immersive professional development program conducted throughout the summer months annually. In short, the USSRC hope to maximize both camp and museum guest participation to promote the scientific activities taking place on the ISS, as well as highlight the technology that allows such an exchange to take place.

Expected Questions:

1. What was your favorite subject in school?
2. What was your toughest subject in school?
3. Who were your heroes growing up?
4. What is something you learned at Space Camp you are using in space?
5. What advice would you give a student who wants to become an astronaut?
6. What advice would you give to someone at Space Camp this week?
7. Were you afraid when your rocket launched?
8. What was the hardest thing in astronaut training?
9. How often do you talk to your family?
10. Do you speak Russian with the Russian cosmonauts?
11. What does it smell like on the ISS?
12. What is the coolest thing that you have seen in space?
13. What is your favorite food to eat in space?
14. What medical research are you working on while you're on the Space Station?
15. What other cool research projects are you helping with?
16. As a researcher, do you think NASA's biological space research will one day lead to a cure for diseases like HIV or cancer?
17. Do you work with research projects from other countries?
18. What do you think is the biggest effect on an astronaut's body from long-term spaceflight?
19. How will research on the Space Station help us get ready to go to Mars?

ARISS is always glad to receive listener reports for the above contacts. ARISS thanks everyone in advance for their assistance. Feel free to send your reports to aj9n(a)amsat.org or aj9n(a)aol.com. Listen for the ISS on the downlink of 145.8Ø MHz.

Exp. 47 on orbit
Jeff Williams KD5TVQ
Oleg Skripochka RN3FU
Aleksey Ovchinin

Exp. 48 on orbit
Anatoly Ivanishin
Kate Rubins KG5FYJ
Takuya Onishi KF5LKS

The next ARISS Application Window will begin September 1, 2016 and run through November 1, 2016.

Be alert for the official announcement which will be released the second half of August. The announcement will include links to the updated Application Guide as well as the application form and other information pertinent to the application process.

Look for the announcement here in the AMSAT News Service Bulletin, via the AMSAT-BB, via the ARRL and several other news venues.

[ANS thanks ARISS, Charlie AJ9N and David AA4KN for the above information]

Satellite Shorts From All Over

+ ISS R&D Presentations ISS Contact and Booth Photos

If you weren't able to attend the ISS Research & Development Conference last month, or watch the live webcast, use this link to access all the videos, presentations and photos:

http://www.issconference.org/resources.php

[ANS thanks the American Astronautical Society and the ISS R&D Confrence for the above information]

+ Want to learn more about Rocket and Space Technology?

Visit Robert A. Braeunig's Rocket and Space technology site at http://www.braeunig.us/space/index_top.htm

[ANS thanks C. Robert Welti, PhD. for the above information]

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Support the FOX Satellites
http://tinyurl.com/ANS220-SupportFox

Support ARISS
http://tinyurl.com/ANS220-SupportARISS

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
EMike McCardel, AA8EM
aa8em at amsat dot org